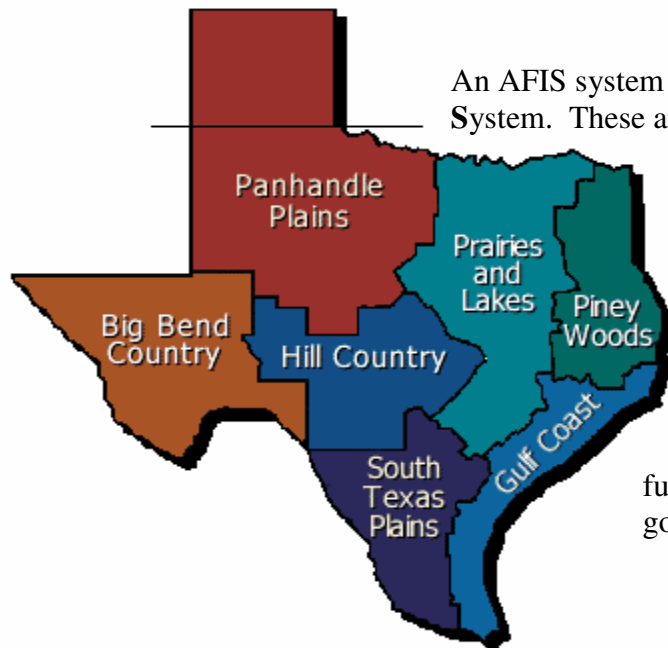


Panhandle Regional AFIS Network



An AFIS system is an Automated Fingerprint Identification System. These are sophisticated computer systems that have the ability to look at fingerprint images and assist fingerprint examiners in finding "matches".

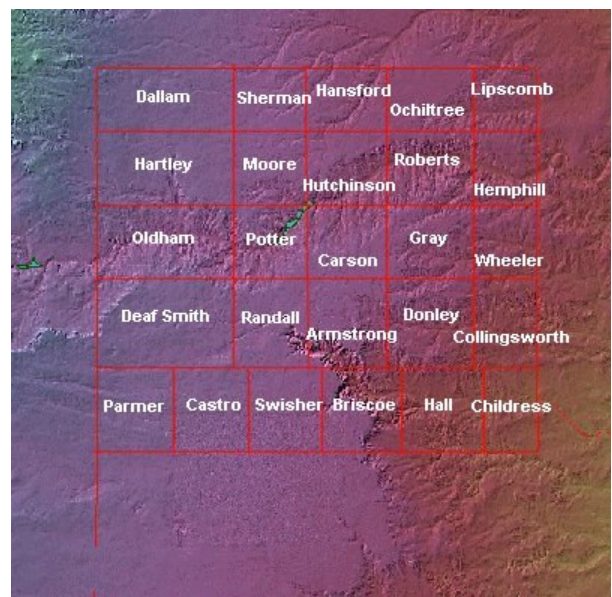
Beginning in 2004, the Panhandle Regional Planning Commission applied for and received Law Enforcement Terrorism Prevention Funds which are responsible for funding the initial phase and current on-going phases of this AFIS network.

The Network covers 26 Counties in the north Texas Panhandle, including the City of Amarillo, from Dallam to Childress county. This geographical area consists of over 27,000 square miles and provides protection to a combined 800,000 people living in these counties. This is a land mass area larger than the State of West Virginia.

The AFIS Network consists of 3 primary components. The first two are computerized components for **data entry** into the database. The last component is a human factor, assisted by computer technology, to **extract relevant data** from the first two systems.

1. Livescan
2. AFIS Computer
3. Latent Print Examiner

As this project nears completion, a Livescan and AFIS system will be located in each of the 26 Counties. Each County will be responsible for the developed training of their latent print examiner(s).





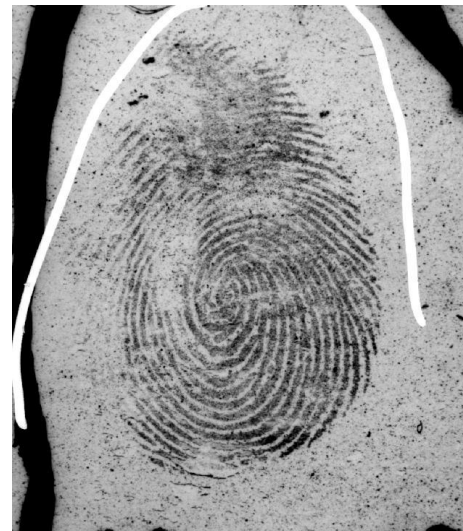
Livescan is a system that allows the capture of high quality images of a persons fingerprints, without the use of ink. These images are captured as a digital image. Images are typically acquired during the arrest of a person. In an increasing number of situations, more and more employers are requiring fingerprints of employees. The most common are Loan Officers, and Teachers. Concealed Handgun License holders are

also fingerprinted during their application and renewal process.

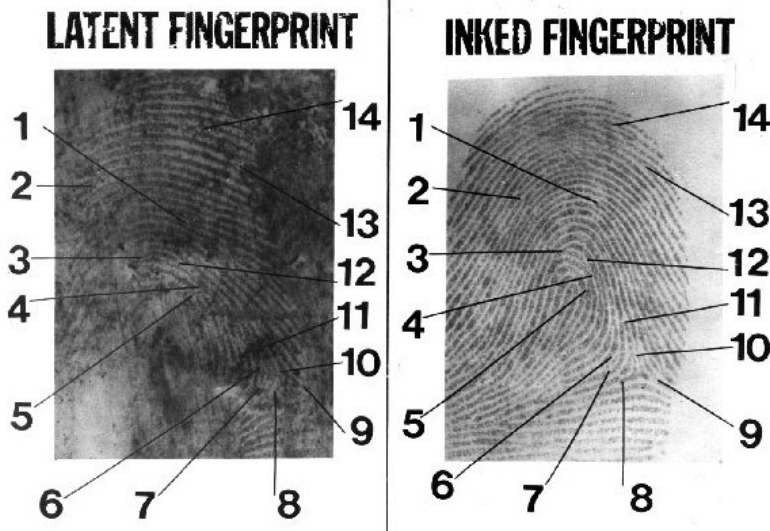
Once fingerprints are collected in arrest situations, the fingerprint images and text data are electronically submitted to two places. One is the Texas Department of Public Safety's Crime Records center in Austin. The other submission is to the AFIS system in the county where the livescan is located.

AFIS systems are operated by trained personnel within the Department. AFIS systems have different levels of operation. Initially, operators import the fingerprint images (submitted from livescans) and classify each of the ten fingerprint images. If ten fingerprint cards are submitted, the operator must examine each of the fingerprints on each card (100 fingerprint images). Once the classification process is completed, the images are stored on the local computer **and** a copy forwarded to the Regional Database, which is located in the Amarillo Police Department.

A secondary operational area of AFIS is the entry of crime scene fingerprint images, referred to as Latent Prints. This consists of operators scanning the latent print into the AFIS system. Once the latent is digitized, the unique characteristics of the image must be identified and marked by the operator. These unique characteristics are referred to as minutiae, which is Latin for *Small Details*. This data entry is much more involved than the entry of the livescan tenprints. These latent prints are initially entered in the local computer and searched against the local database of livescan prints. The latents are also forwarded to the Regional Database and searched against the collecting pool of **all** Agencies fingerprints. To date, the Regional Database consists of approximately 175,000 ten print records (which is 1,750,000 individual fingers).



Latent Print Examinations are the most crucial element of an AFIS system. A minimal suggested amount of training just for latent examiners calls for over 100 hours of classroom training and several years of practical experience.



Once an AFIS system has compared minutiae from the latent print to the tenprint, the system produces a list of the "*Most Likely*" candidate matching tenprint images. The latent examiner then has to compare the tenprint images to the latent print.

As illustrated in the example to the left, the comparison process is clouded by poor quality associated with latent prints. This is where

experience and training plays a key role. In addition to the visible obstacles, examiners are often exposed to intense political pressure due to public demands to solve a crime.

In the example above, the fingerprint image on the left was collected from an explosive component involved in the New Madrid, Spain train bombing. The image on the right is from Mathew Mayfield, who was **wrongfully identified** as a suspect based on an improper fingerprint identification.

AFIS systems are a valuable tools, however the there is **no** room for error. The utmost diligence and ethical standards must be employed when working with fingerprint comparisons. It is for this reason that **ALL** latent fingerprint comparisons must be verified by another examiners.

Some examiners in our region have considerable experience with latent prints, and have made themselves available to other Department in the Texas Panhandle for verifying latent prints. With this network of AFIS systems, senior examiners have immediate access to view fingerprint matches anywhere in the Panhandle. This access can dramatically expedite the identification process without compromising integrity.

The Panhandle AFIS Network is one of the most progressive and complete tools to aid criminal investigations in our communities. This is not only a benefit to Law Enforcement, but the public community they serve as well.

This project has gained State and National attention and has recently been published in the Lone Star Forensics Journal, a publication of the Texas Division of the International Association of Identification.

The Panhandle AFIS Network promotes cooperative measures from many Law Enforcement Agencies. Since the initial setup of the system in September 2005, hundreds of fingerprint identifications have already been established throughout our region.